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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,829	01/14/2004	Seigo Shiraishi	I0873.1209USD1	5512
<div>7590 Hamre, Schumann, Mueller &amp; Larson, P.C. P.O. Box 2902-0902 Minneapolis, MN 55402</div>			<div>EXAMINER NGUYEN, TAI V</div>	
			<div>ART UNIT 3729</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE 12/19/2007</div>	<div>DELIVERY MODE PAPER</div>

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<p align="center"><b>Office Action Summary</b></p>	<p>Application No.</p> <p align="center">10/757,829</p>	<p>Applicant(s)</p> <p align="center">SHIRAIISHI ET AL.</p>	
	<p>Examiner</p> <p align="center">Tai Van Nguyen</p>	<p>Art Unit</p> <p align="center">3729</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13,17 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13,17 and 19-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. The applicants' amendment filed 9/27/227 has been fully considered and made of record.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 13, the phrase "matching member having a low sound velocity to reduce sound reflections when sound travels between a vibration device" (lines 9-11) is new matter. The specification, as originally Filed, does not provide support a matching member having a low sound velocity to reduce sound reflections when sound travels between a vibration devices.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13, 17 and 19-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 13, it is unclear from the disclosure what is meant by "a low sound velocity to reduce sound reflections when sound travels between a vibration device" (lines 10-11).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 13, 17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Tone et al (US 4,523,122).

As applied to claim 13, Tone et al. discloses a method for manufacturing an acoustic matching member: the acoustic matching member comprising at least two layers including a first layer and a second layer: the method comprising the steps of: (a) filling voids of a porous member (as discussed at column 5, lines 32-45) with a fluid filling material to create the first layer (e.g. 17); (b) providing a surplus fluid filling material onto a surface of the porous member to create the second layer (e.g. 16); and (c) solidifying the fluid filling material inside the voids and the surplus fluid filling material at the same time wherein the porous member and the filling material provide an

acoustic matching member having a low sound velocity (as discussed at column 9, lines 1-65+).

Because the porous member and filling material are "acoustic", this would inherently produce a low sound velocity to reduce sound reflections when sound travels between a vibration device and an emission device.

As applied to claim 17, Tone et al. disclose the filling material comprises epoxy resin (column 8, lines 19-25).

As applied to claim 19, Tone et al disclose wherein after solidification the density of the second layer is less than the density of the first layer (column 12, Table 3).

As applied to claim 20, Tone et al disclose further comprising: shaping the first layer and the second layer into a desired form after solidification (column 12, lines 41-51)

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tone in view of Niwa et al (US 5,688,728).

As applied to claim 21, Tone et al disclose all of the limitations of the claimed invention except that a sintered porous member of ceramic. However, Niwa et al teaches a sintered porous member of ceramic (column 4, lines 1-11).

It would have been obvious to one of ordinary skill in the art this time the invention was made to have modified the method of Tone by a sinter porous member, as taught by Niwa, to positively improved porous ceramic material (column 1, lines 52-54).

7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tone in view of Brinker et al. (US 5,948,482).

As applied to claim 22, Tone et al disclose all of the limitations of the claimed invention except that the filling material is a wet get material that comprises a solvent, and a drying step is conducted to remove the solvent and form a dry gel material. However, Brinker teaches the filling material is a wet get material that comprises a solvent, and a drying step is conducted to remove the solvent and form a dry gel material (as discussed at col. 3, lines 21-65+ and col. 5, lines 1-56).

It would have been obvious to one of ordinary skill in the art this time the invention was made to have modified the method of Tone by filling material is a wet get material that comprises a solvent and a drying step, as taught by Brinker, to positively provide supported the solid state to shrinkage stops (column 2, lines 26-28).

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 13, 17 and 19-22 have been considered, but have been considered to be met in view of the new ground(s) of rejection set forth above.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tai Van Nguyen whose telephone number is 571-272-4567. The examiner can normally be reached on M-F (7:30 A.M - 4:30 P.M).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN. December 11, 2007



A. DEXTER TUGBANG  
PRIMARY EXAMINER